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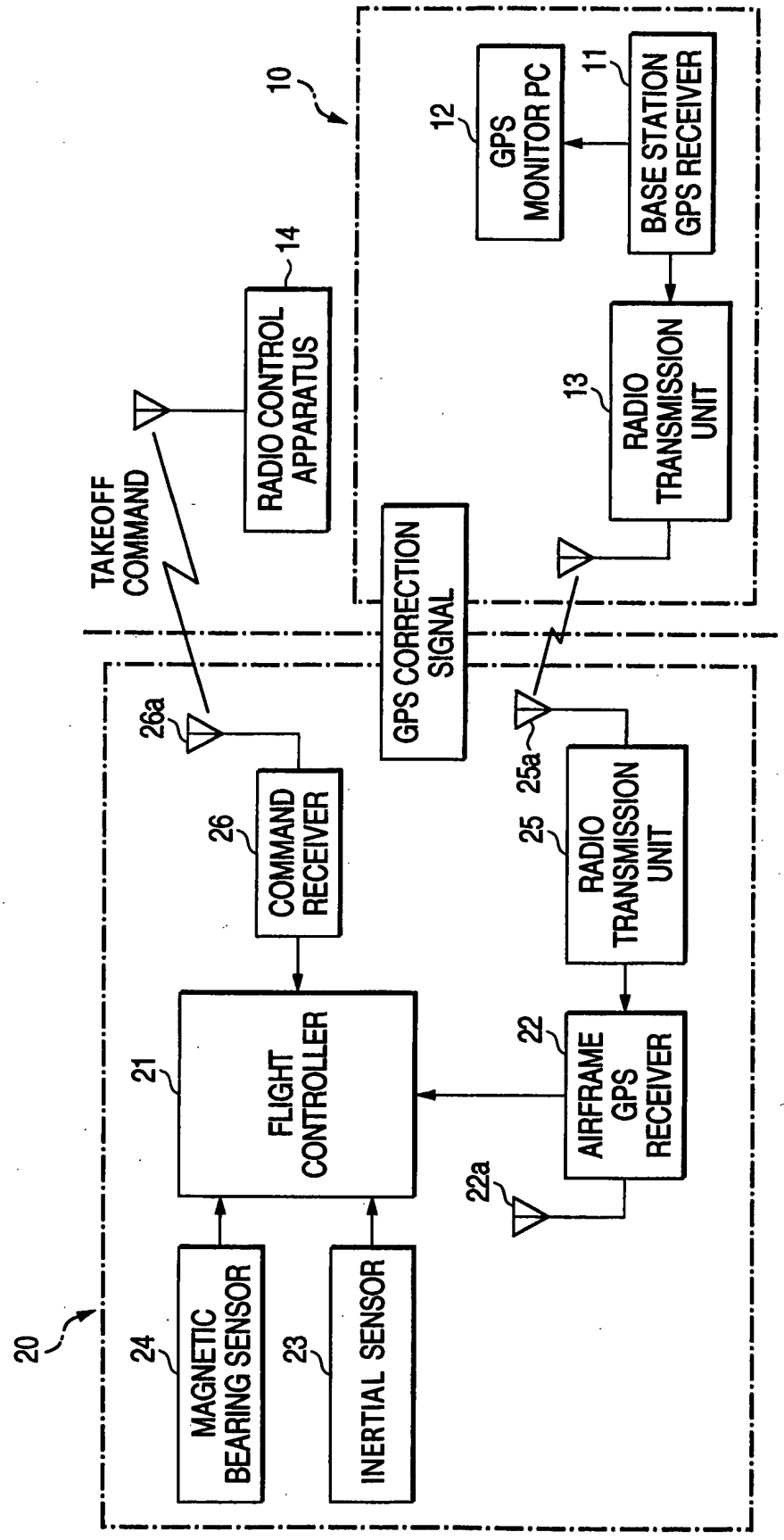
FIG. 1



Replacement Sheet
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FIG. 3

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FIG. 4

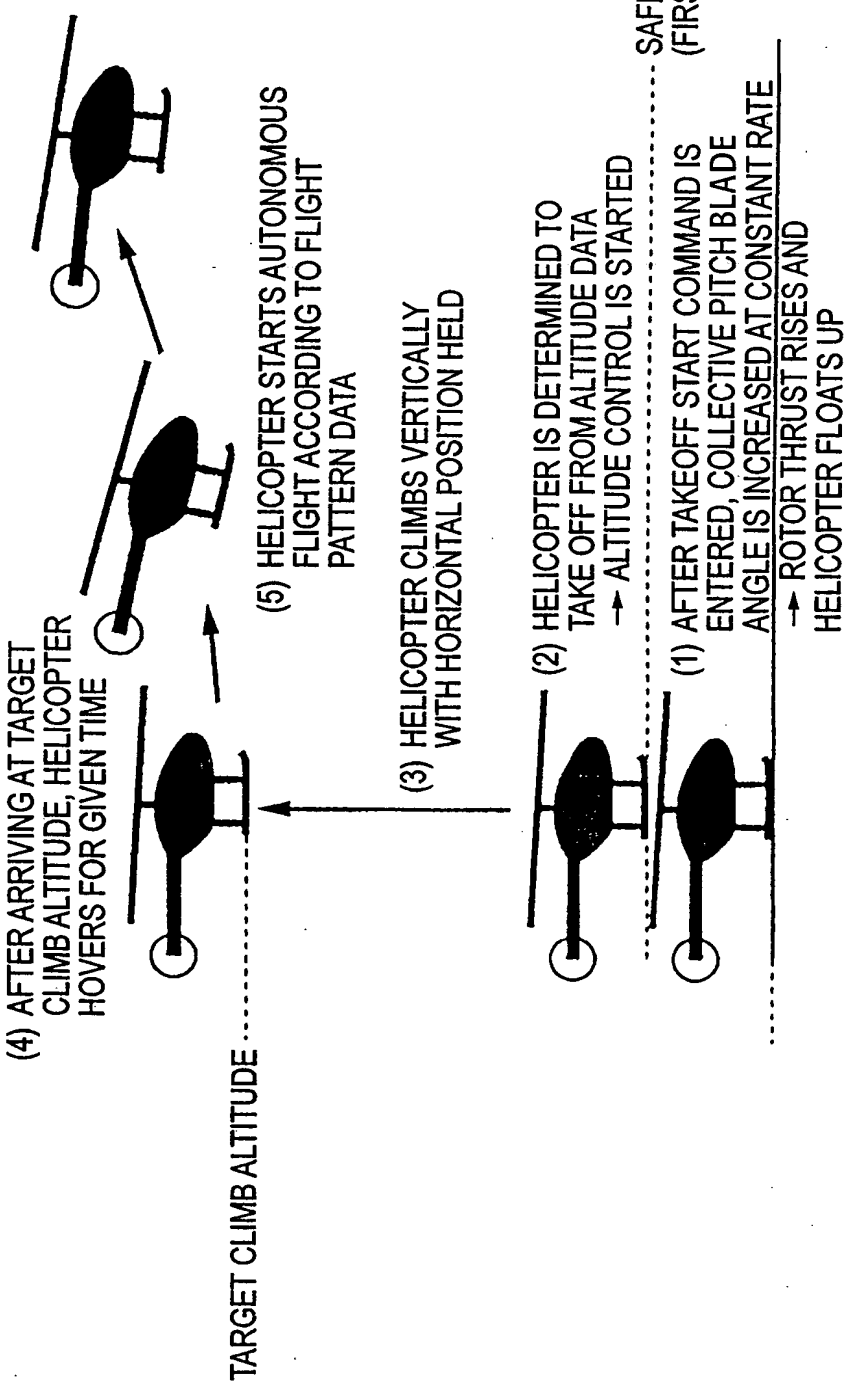
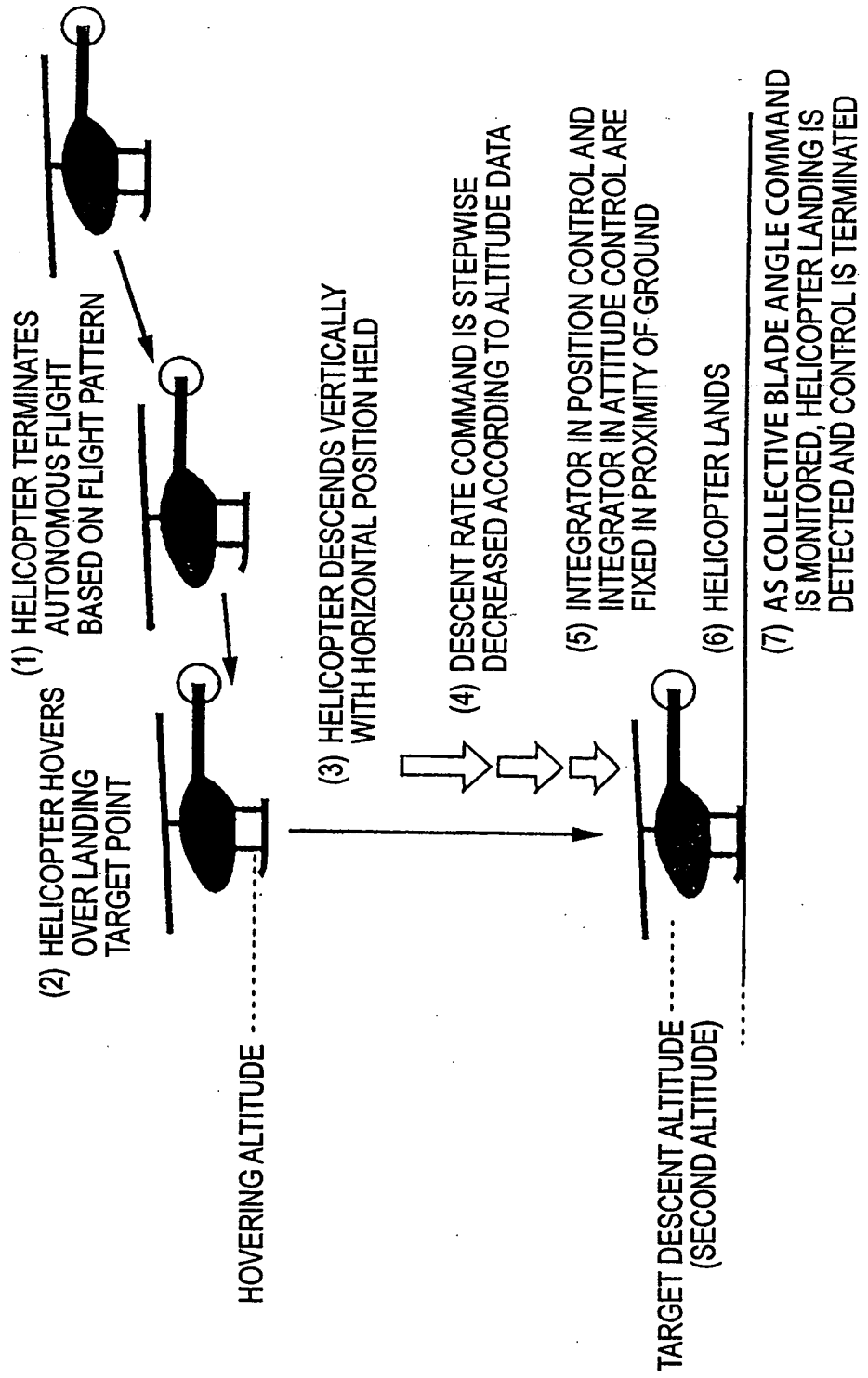

(1) AFTER TAKEOFF START COMMAND IS ENTERED, COLLECTIVE PITCH BLADE ANGLE IS INCREASED AT CONSTANT RATE
→ ROTOR THRUST RISES AND HELICOPTER FLOATS UP
(2) HELICOPTER IS DETERMINED TO TAKE OFF FROM ALTITUDE DATA
→ ALTITUDE CONTROL IS STARTED
SAFE ALTITUDE (FIRST ALTITUDE)
(3) HELICOPTER CLIMBS VERTICALLY WITH HORIZONTAL POSITION HELD
(5) HELICOPTER STARTS AUTONOMOUS FLIGHT ACCORDING TO FLIGHT PATTERN DATA
(4) AFTER ARRIVING AT TARGET CLIMB ALTITUDE, HELICOPTER HOVERS FOR GIVEN TIME
TARGET CLIMB ALTITUDE

FIG. 5


(1) HELICOPTER TERMINATES AUTONOMOUS FLIGHT BASED ON FLIGHT PATTERN
(2) HELICOPTER HOVERS OVER LANDING TARGET POINT
HOVERING ALTITUDE
(3) HELICOPTER DESCENDS VERTICALLY WITH HORIZONTAL POSITION HELD
(4) DESCENT RATE COMMAND IS STEPWISE DECREASED ACCORDING TO ALTITUDE DATA
(5) INTEGRATOR IN POSITION CONTROL AND INTEGRATOR IN ATTITUDE CONTROL ARE FIXED IN PROXIMITY OF GROUND
(6) HELICOPTER LANDS
(7) AS COLLECTIVE BLADE ANGLE COMMAND IS MONITORED, HELICOPTER LANDING IS DETECTED AND CONTROL IS TERMINATED
TARGET DESCENT ALTITUDE (SECOND ALTITUDE)